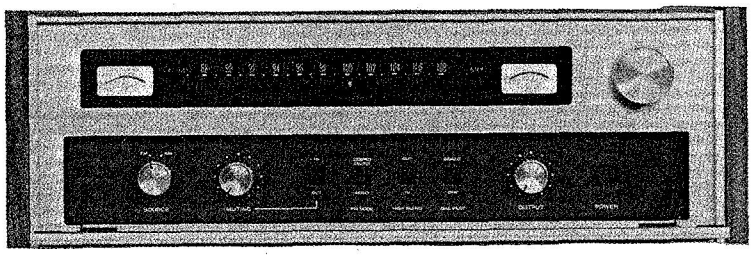
TEAC®

AT-201

FM·AM STEREO TUNER
SERVICE MANUAL



TEAC CORPORATION

SALES OFFICE: SHINJUKU BUILDING
1-8-1, NISHI-SHINJUKU, SHINJUKU, TOKYO

TEAC HONGKONG LIMITED
MAIN OFFICE: ROOM NO. 1105
MELBOURNE PLAZA, 33 QUEEN'S ROAD
CENTRAL, HONG KONG

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7733 TELEGRAPH ROAD
MONTEBELLO, CALIFORNIA 90640
U.S.A.

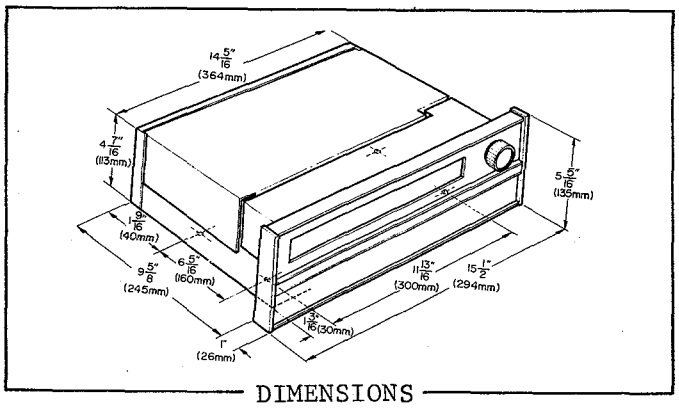
EUROPEAN DISTRIBUTOR: TEAC EUROPE B.V.
KABELWEG 45-47, AMSTERDAM-W. 2,
HOLLAND

PRINTED IN JAPAN 1172E05·S-0052

MA2010E100

1. SERVICE DATA

	Type:	All transistor AM/FM stereo tuner
	Semiconductors:	33 Transistors, 3 FETs, 4 ICs, 34 Diodes
FM TUNER	Tuning range:	88 to 108MHz
	Sensitivity (IHF):	1.8μV
	Image Rejection:	Better than 100dB at 98MHz
	IF Rejection:	Better than 100dB at 98MHz
	Selectivity:	Better than 70dB
	Capture Ratio:	Less than 1.0dB
	AM Suppression:	Better than 55dB (FM 400Hz, 100% AM 1kHz, 30% modulation)
	Signal To Noise Ratio:	Better than 70dB
	Harmonic Distortion:	Less than 0.3% (400 Hz, 100% modulation for both stereo and monophonic sound reproduction
	Frequency Response:	20 to 15,000Hz ±0.5dB
	Output:	Semi-Fixed: 1.1V at 400Hz, 100% modulation Variable: 1.1V maximum Output impedance 2,500Ω for maximum output
	FM Stereo Separation:	Better than 40dB at 400Hz, 100% modulation Better than 30dB at 50 to 10,000Hz Better than 25dB at 20 to 15,000Hz
	19 and 38kHz Suppression:	Better than 60dB
	Antenna Input Impedance:	300Ω balanced, 75Ω unbalanced
	Frequency Drift:	20kHz maximum
	Automatic Stereo Performance Level:	30μV
	FM Muting Level:	10μ to 30μV
AM TUNER	Sensitivity (IHF):	100μV/m when bar antenna is used.
	Image Rejection:	Better than 70dB at 1,000kHz
	IF Rejection:	Better than 80dB at 1,000kHz
	Selectivity:	Better than 30dB
	Signal To Noise Ratio:	Better than 45dB
	Harmonic Distortion:	Less than 2%
	Output:	Semi-Fix: 0.3V at 400Hz, 30% modulation Variable: 0.3V maximum Output impedance 2,500Ω for maximum output
	Power Requirements:	117V AC 60Hz 20W
	Weight:	20-1/4 lbs. net



DIMENSIONS

2. CABINET REMOVAL & COMPONENTS LOCATION

CABINET ASSEMBLY REMOVAL

- Lay the equipment upside down.
- Remove the four mounting screw from the bottom of the cabinet.
- Slide the unit from the cabinet.

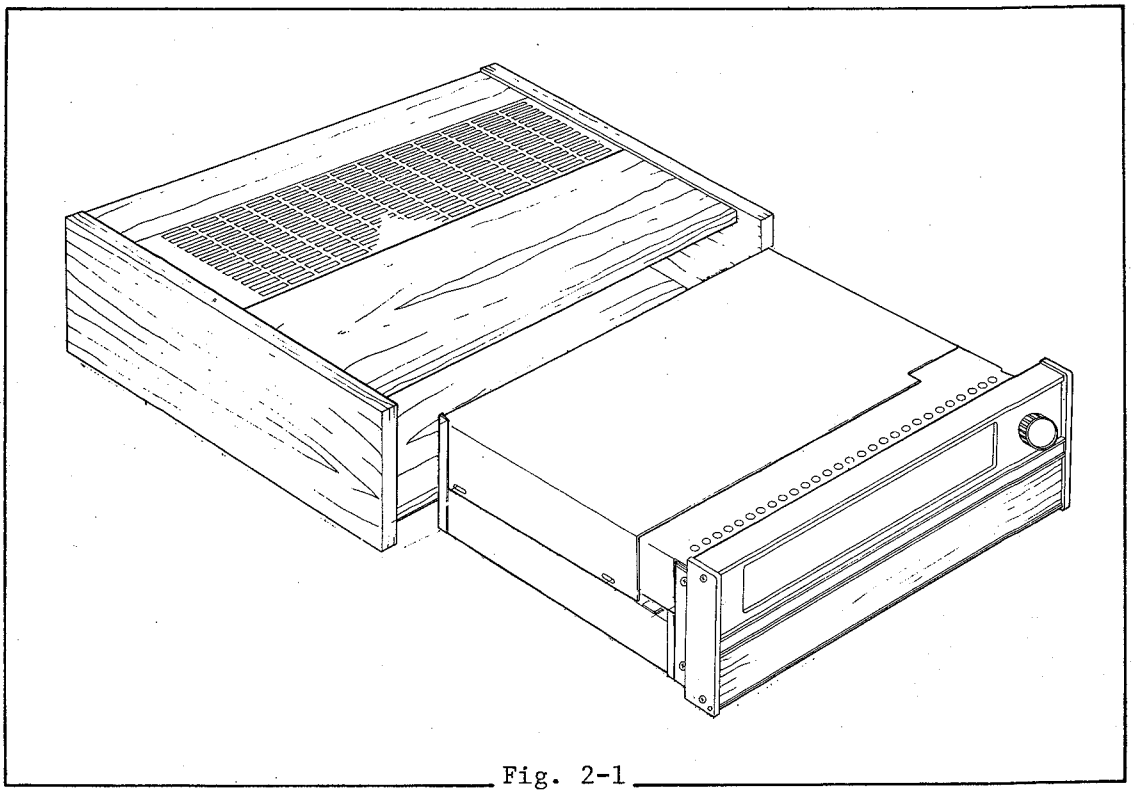
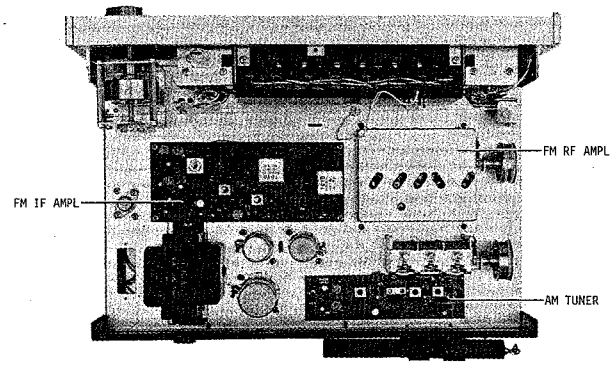
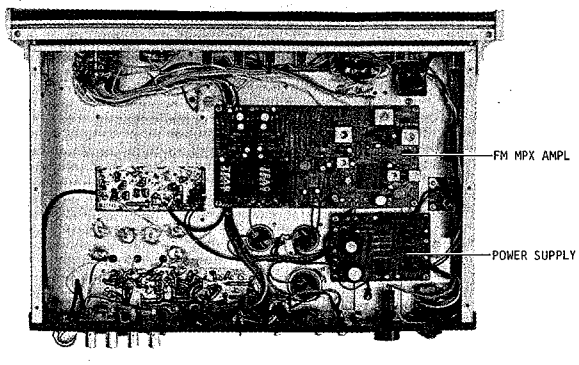


Fig. 2-1



TOP VIEW



BOTTOM VIEW

Fig. 2-2

3. FM ALIGNMENT

FM ALIGNMENT PROCEDURE

FM IF Alignment

NOTE: Mechanical crystal filters are used in this FM IF amplifier. Except for L-106 (1st IF coil located on the RF ampl.), the FM IF amplifier requires no adjustment, only an operational check.

1. No setting required for controls of unit.
2. Connect OUTPUT jack of GENESCOPE to the test point on the RF amplifier (see figure below).
3. Connect FROM·TP jack of GENESCOPE through a 100Ω∿100kΩ resistor to No. 6 (Q-203) point (see figure below).
4. Adjust GENESCOPE 10.7 MHz level and sweep to observe IF response curve (see figure below).

   NOTE: Keep the genescope output as low as possible.

5. Correct IF response is shown in figure below. If adjustment is necessary, adjust the top core of L-106 for response as shown.

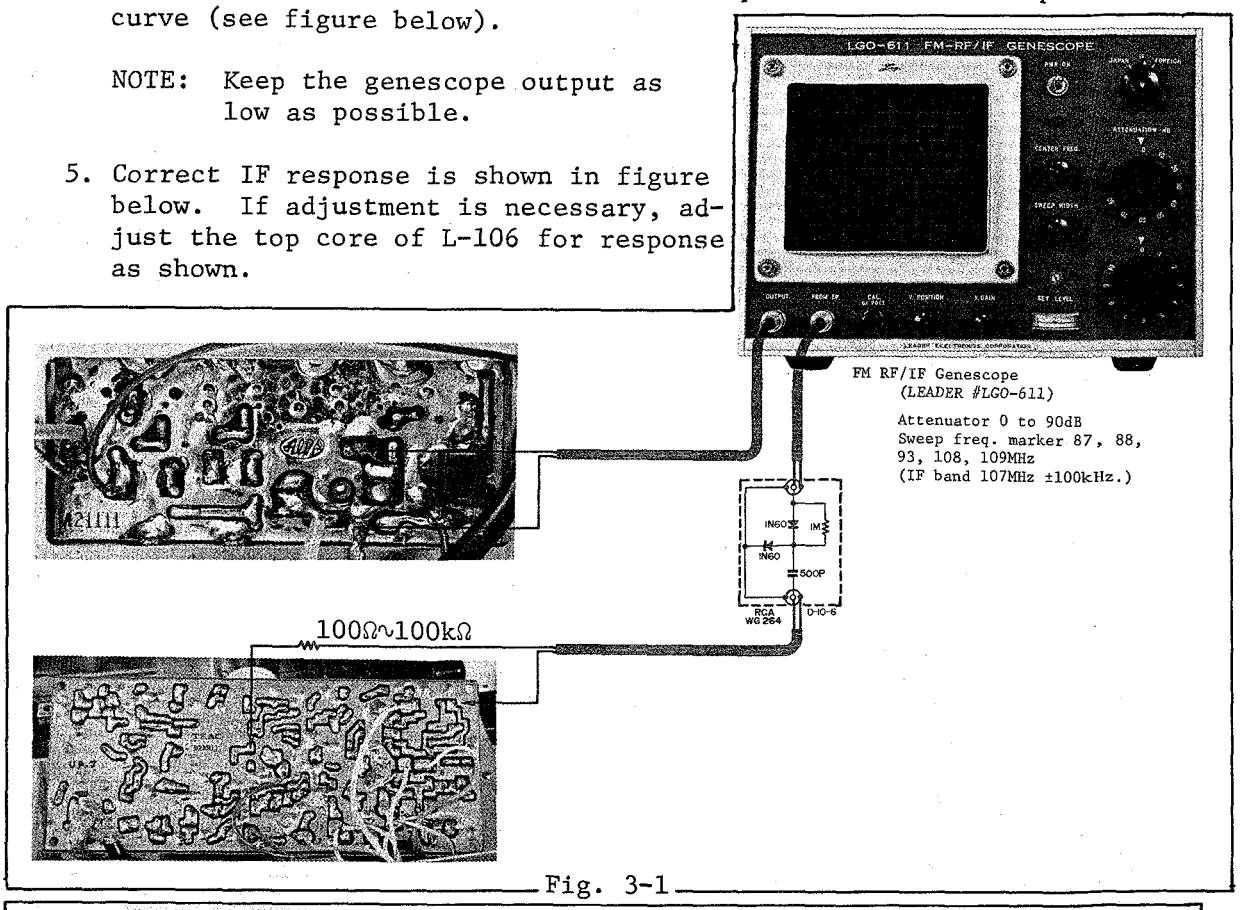


Fig. 3-1

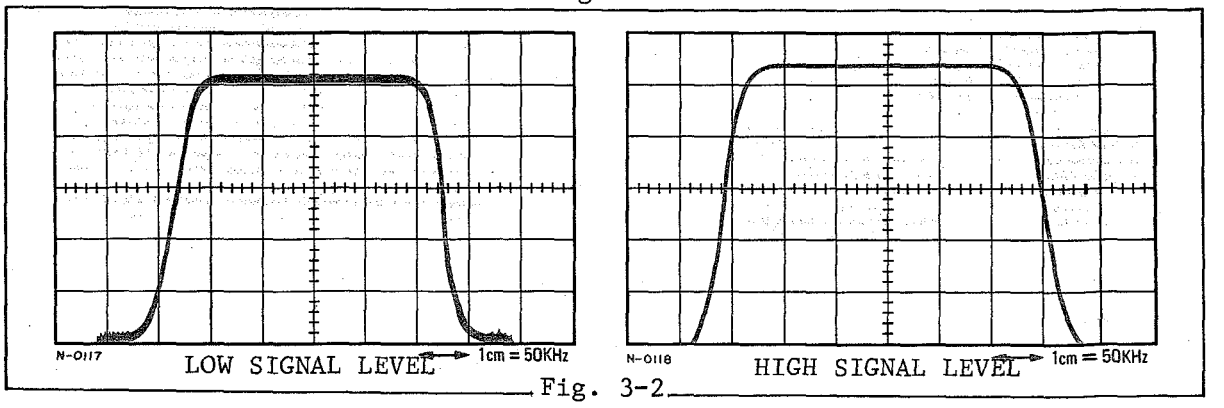


Fig. 3-2

FM Detector Adjustment

6. Connect FROM TP jack of GENESCOPE to #8 on the IF ampl. PC board. Use specified probe in series with the GENESCOPE lead.
7. Reduce GENESCOPE output to close to the noise level (see figure below). Observe the detector response curve.
8. Adjust the bottom core of T-201 for the most linear response.
9. Adjust marker 10.7 MHz signal for zero center of S curve with the top core of T-201.

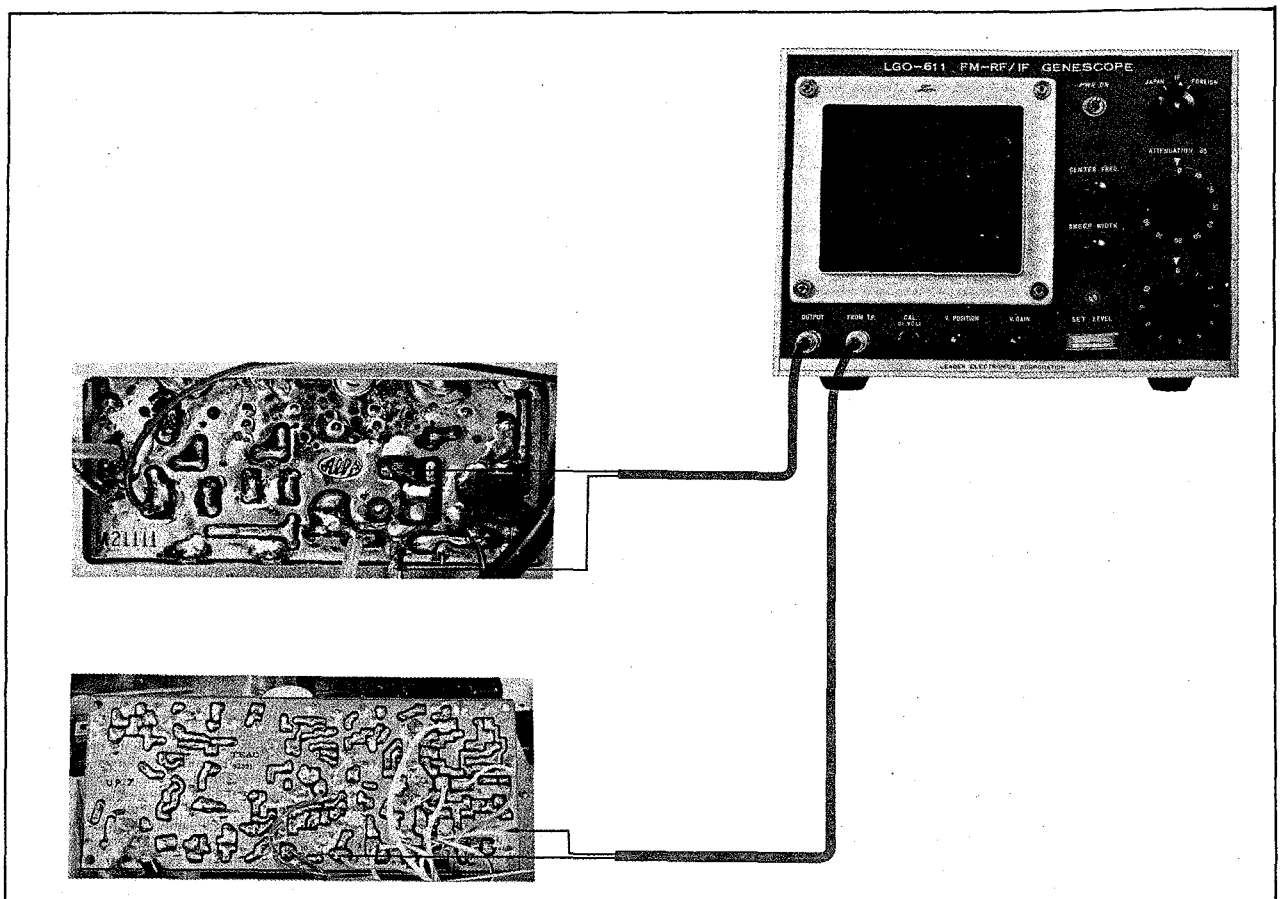
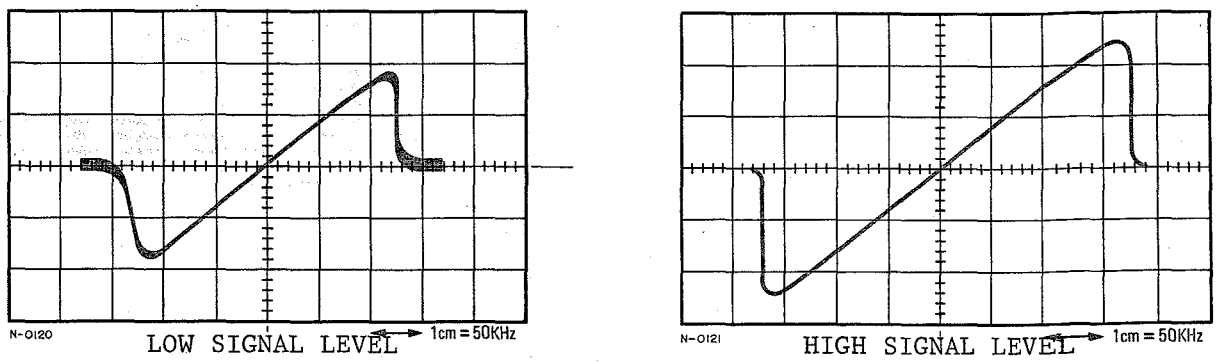


Fig. 3-3



DETECTOR S CURVE RESPONSE

Fig. 3-4

FM RF AMPLIFIER ALIGNMENT

NOTE: Turn the dial pointer to the extreme left with the turning knob. The dial pointer should coincide with the tracking marker. Set the equipment as follows:

SOURCE SW: FM position
MUTING SW: OUT position
OUTPUT Control: fully clockwise

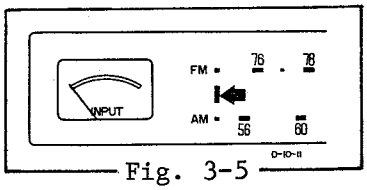


Fig. 3-5

1. Turn dial pointer to 98 MHz.
2. Connect FM SSG to ANTENNA (FM 300Ω) terminals. Use specified matching box with FM SSG lead.

NOTE: Matching box reduces generator voltage to the anetnna terminals by one-half.

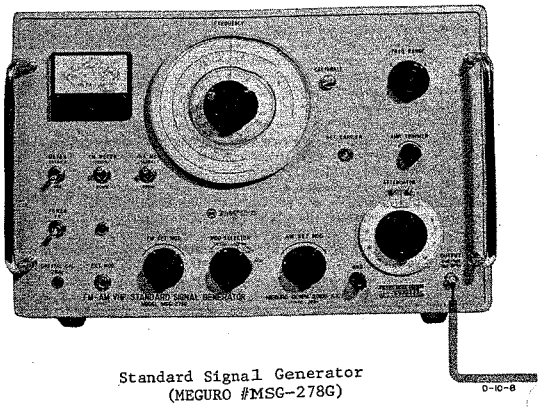
3. Set FM SSG frequency to 98 MHz, set FM SSG output to 66 dB, 75kHz deviation with 400 Hz.
4. Connect DISTORTION METER to FRONT jack, and adjust top and bottom cores of T-201 for minimum distortion reading.

CAUTION: Do not turn the core more than 1/2 revolution.

Tracking Adjustment

NOTE: Connect oscilloscope to OUTPUT jack, and observe the output level during this adjustment. Use as low an output level as possible.

5. Set FM SSG frequency and turn dial pointer to 88 MHz.
6. Connect an AC VTVM to the FRONT jack, and set voltage range to the 2 volt position.
7. Adjust the core of L-105 for a maximum reading on the AC VTVM.
8. Set the FM SSG frequency and turn the dial pointer to 108 MHz. Adjust the trimmer of TC-105 for a maximum reading on the AC VTVM.
9. Reset the FM SSG frequency and dial pointer to 88 MHz, AC VTVM should read maximum. If AC VTVM reading has decreased from that obtained in step 7, repeat step 7 and 8 several times until maximum gain is obtained.



Standard Signal Generator
(MEGURO #MSG-278G)
FM: 87MHz to 109MHz
RF: output voltage
-10dB to 106dB

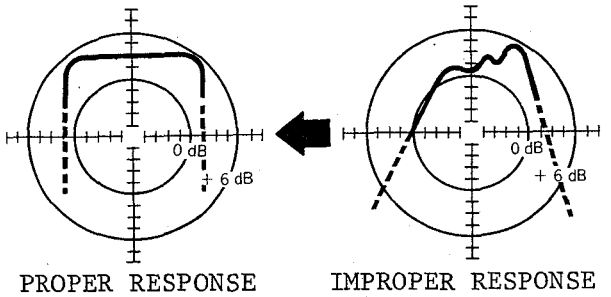
FM IFT Alignment

NOTE: Proceed with the following only after completing the alignments above.

10. Set FM SSG frequency and dial pointer to 88 MHz.
11. Set FM SSG output to 15 dB.
12. Adjust the cores of L-101, L-102, L-103 L-104 for a maximum reading on the AC VTVM.
13. Reset the FM SSG frequency and dial pointer to 108 MHz.
14. Adjust the trimmers of TC-101, TC-102, TC-103, TC-104 for a maximum reading on the AC VTVM.
15. Adjust the top and bottom cores of L-106 for a maximum reading on the AC VTVM.

DISCRIMINATOR (T-201) ADJUSTMENT

16. Connect the distortion meter and oscilloscope to the FRONT jack.
17. Set the FM SSG output to 60 dB, then set the FM SSG frequency and dial pointer to 98 MHz.
18. Carefully adjust the top and bottom ocres of T-201 for minimum distortion.



PROPER RESPONSE IMPROPER RESPONSE

NOTE: A more precise adjustment can be achieved by connecting the TEAC AZ-200 Total Performance Indicator via the special outlet on the rear panel of the AT-201. L-106 is then adjusted to obtain the waveform shown to the left in figure.

Fig. 3-6

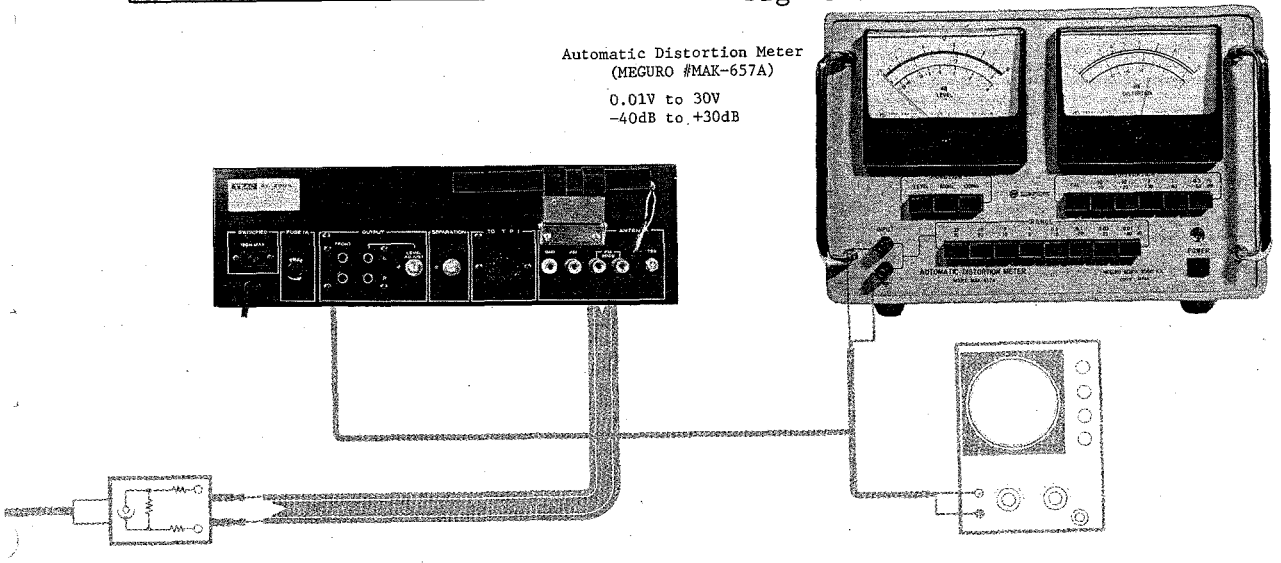


Fig. 3-7

FM IF AMPL. ASSOCIATED CIRCUITRY ADJUSTMENT

Preparation Setting

VR201: MIDDLE POSITION, VR202: FULLY COUNTER CLOCKWISE
VR203: FULLY CLOCKWISE, VR204: FULLY CLOCKWISE

TUNING Meter Calibration

19. After completing the T-201 adjustment, reduce the FM SSG output to zero (no signal applied). TUNING meter should be indicate the zero center position. If it does not, slightly readjust the top core of T-201.
20. After readjusting, repeat steps 18 and 19 until correct readings are obtained.
21. While observing the TUNING meter, slowly rotate the dial pointer away from the test signal. The TUNING meter should deflect an equal distance from the zero center mark. If does not deflect an equal distance both sides of zero, adjust VR-201 as required.

INPUT Meter Calibration

22. Set the FM SSG frequency and dial pointer to 98 MHz. Set the FM SSG output to 40 dB.
23. Adjust T-202 for a maximum indication on the INPUT meter.
24. Adjust VR-202 for full scale on the INPUT meter when the FM SSG output is set to 60 dB.
25. Reduce the FM SSG output to approximately 30 dB (from the previous setting of 60 dB), the INPUT meter should indicate between the black and red scales.
26. Connect a DC VTVM to test point #3 on the PC board. Set the DC VTVM range to the 5 volt position.
27. Adjust T-203 for a maximum reading on the DC VTVM.
28. Set the FM SSG frequency and dial pointer to 98 MHz.
29. Connect DC VTVM to test point #9.
30. Adjust VR-203 for a DC VTVM reading of 1.5 volt.
31. Set the FM SSG output to 60 dB.
32. Connect an AC VTVM to test point #7.
33. Adjust VR-204 for an AC VTVM reading of 170 mV.

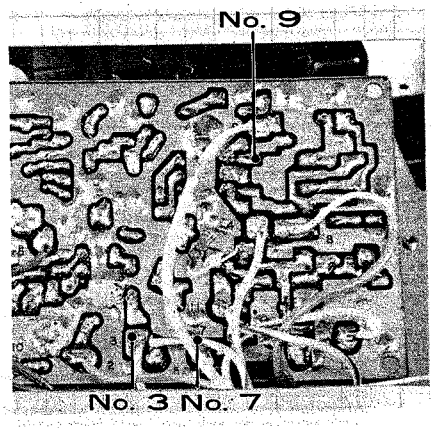


Fig. 3-8

SCA FILTER ADJUSTMENT

1. Connect an AF oscillator (output 1 volt) to test point TP-1 and AC VTVM to test point TP-4 on the MPX PC board.
2. Adjust all trap coils for a minimum reading on the AC VTVM at the specified frequency.

L401: 73 kHz, L402: 67 kHz, L403: 66 kHz

FM MPX ALIGNMENT

Set equipment controls as follows:

SOURCE SW: FM, MUTING SW: OUT, FM MODE SW: STEREO
HIGH BLEND: OUT, OUTPUT: FULLY CLOCKWISE

1. Set the FM stereo signal generator for 75 kHz deviation with 400 Hz and apply this composite signal to EXT MOD jack of the FM SSG.
2. Connect the FM SSG through the 300Ω matching box to the ANTENNA FM 300Ω terminals. Set the FM SSG output to 66 dB, frequency to 98 MHz.
3. Set the dial pointer to 98 MHz.
4. Check both output levels at the FRONT OUTPUT jacks.
5. The output level difference should not exceed ±0.5 dB. If it is not within this limit, adjust VR-402 as required.

STEREO CHANNEL SEPARATION ADJUSTMENT

6. Set the FM STEREO GENERATOR for a stereo composite signal.
7. Connect an AC VTVM to FRONT·L jack of the OUTPUT.
8. Adjust the FM STEREO GENERATOR output for a 0 dB reading on the AC VTVM.
9. Set the FM STEREO GENERATOR to modulate the right channel only.
10. Adjust VR-402 (separation adj.) for a minimum reading on the AC VTVM.
11. Connect an AC VTVM to the R (RIGHT) OUTPUT jack.
12. Set the FM STEREO GENERATOR to modulate the left channel only.
13. Readjust VR-402 slightly and repeat steps 7 through 10.

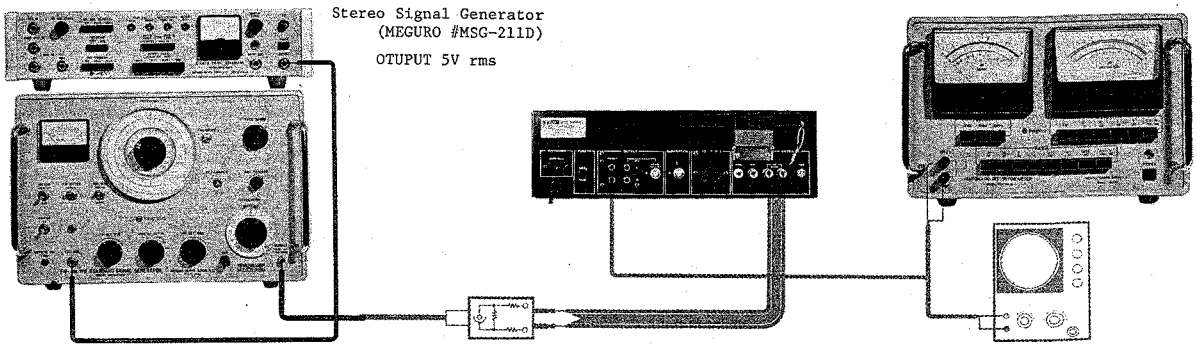


Fig. 3-9

STEREO AUTO SWITCHING LEVEL SET

14. Set the FM STEREO SIGNAL GENERATOR to the stereo composite signal position, and set the FM SSG for external modulation (stereo composite signal), frequency 98 MHz, output 30 dB.
15. Set the tuning dial pointer to the same frequency as the FM SSG.
16. Adjust VR-401 for stereo indicator lamp illumination.
17. Stereo indicator lamp should turn off when the FM SSG output is reduced to 30 dB or less.

4. AM ALIGNMENT

1. TEST EQUIPMENT CONNECTION FOR AM ALIGNMENT ADJUSTMENT

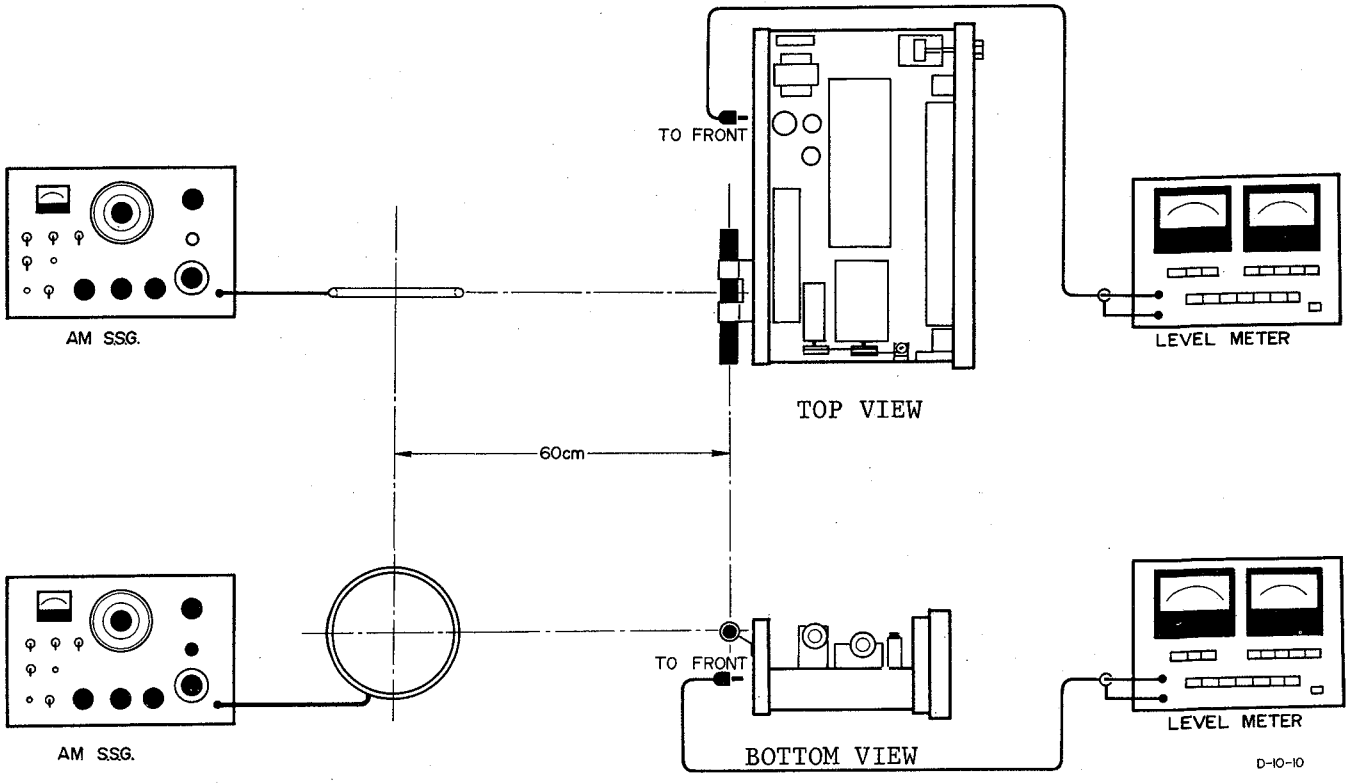


Fig. 4-1

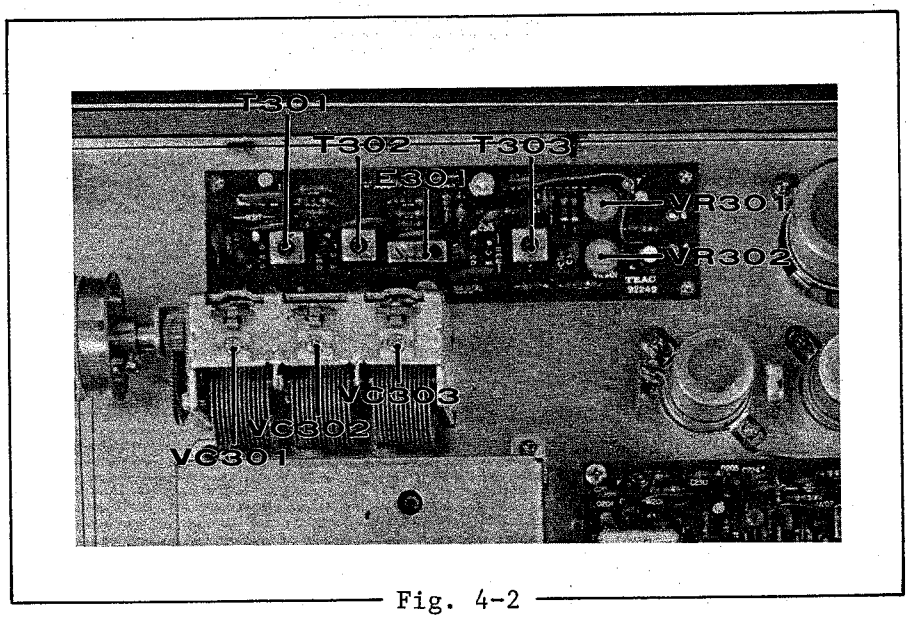


Fig. 4-2

2. AM IF ALIGNMENT

1. Set the tuning dial pointer to 535 kHz.
2. Set the AM SSG frequency to 455 kHz, and 30% modulation with 400 kHz. Adjust the output to approximately 100 dB.

   NOTE: The output should be low as possible.

3. Adjust the cores of T-301 and T-303 for a maximum reading on the level meter.

AM RF ALIGNMENT

1. Set the AM SSG frequency to 600 kHz, using 30% modulation with 400 Hz. Keep the AM SSG output as low as possible during all alignments.
2. Set the tuning dial pointer to 600 kHz.
3. Adjust T-302 (local OSC coil) and T-301 (RF AMPL coil) for a maximum reading on the level meter.
4. Adjust the core of the bar antenna for maximum gain.
5. Repeat steps 3 and 4 several times until the maximum possible gain is obtained.
6. Set the AM SSG and dial pointer frequency to 1400 kHz.
7. Readjust AM SSG output for as require.
8. Adjust trimmer capacitor of TC-303, TC-302 and TC-301 for maximum gain.
9. Repeat above steps several times until accurate tuning is obtained.

INPUT METER Calibration

10. Adjust VR-301 for center scale on the INPUT METER when the SSG output is set to 76 dB, 50% modulation with 400 Hz.

Output Level Set

11. Set the SSG as step 10 and adjust VR-302 for 0.3V at the FRONT OUT jacks.

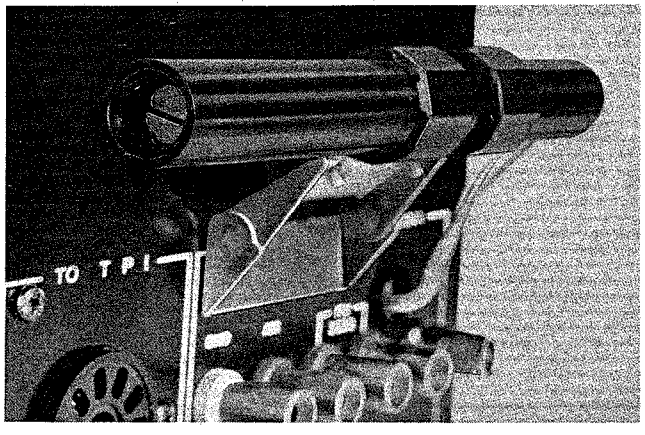
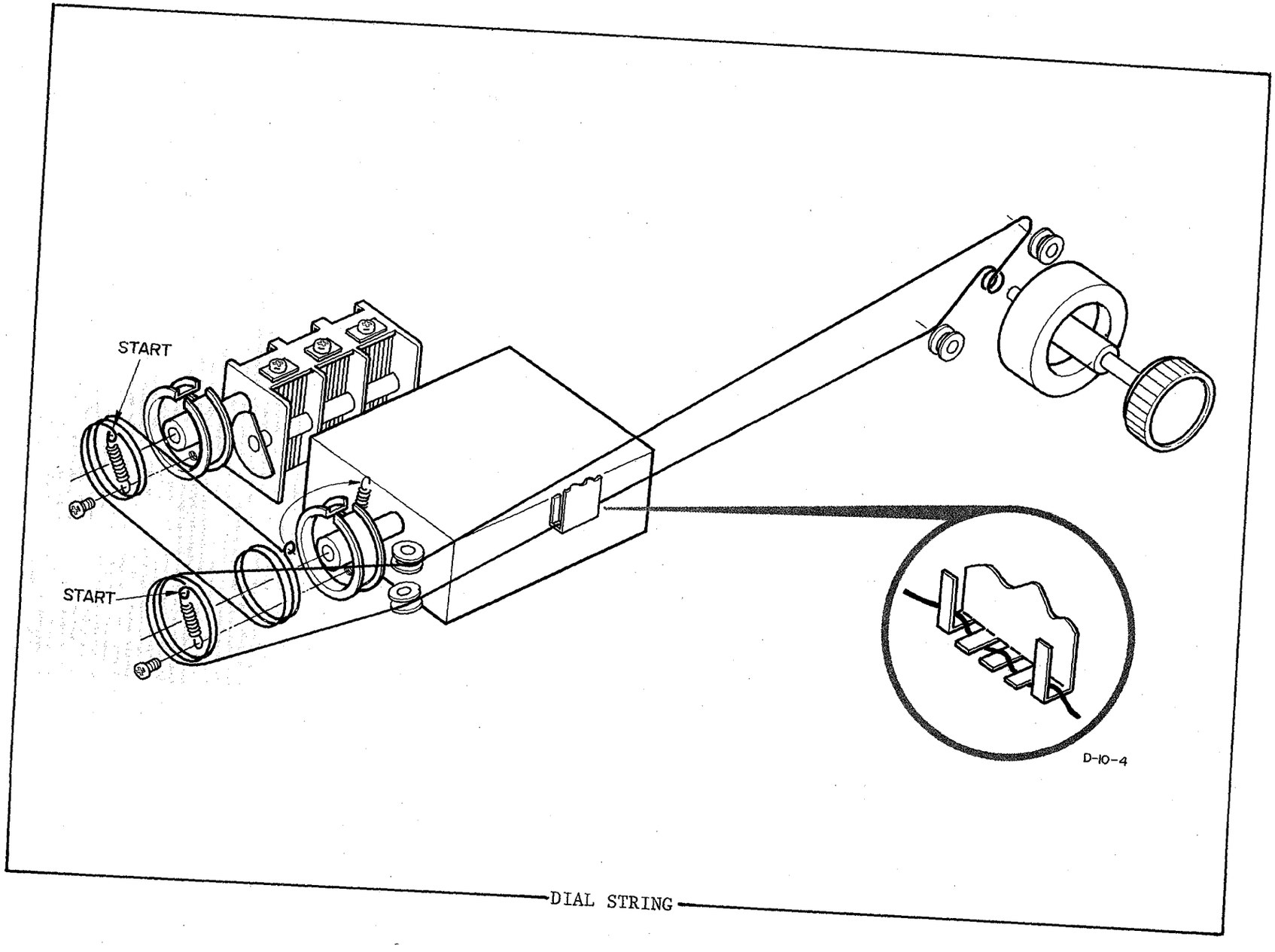


Fig. 4-3 Bar Antenna


START
START
D-10-4
DIAL STRING

TEAC®

AT-201
AM/FM STEREO TUNER
PARTS LIST

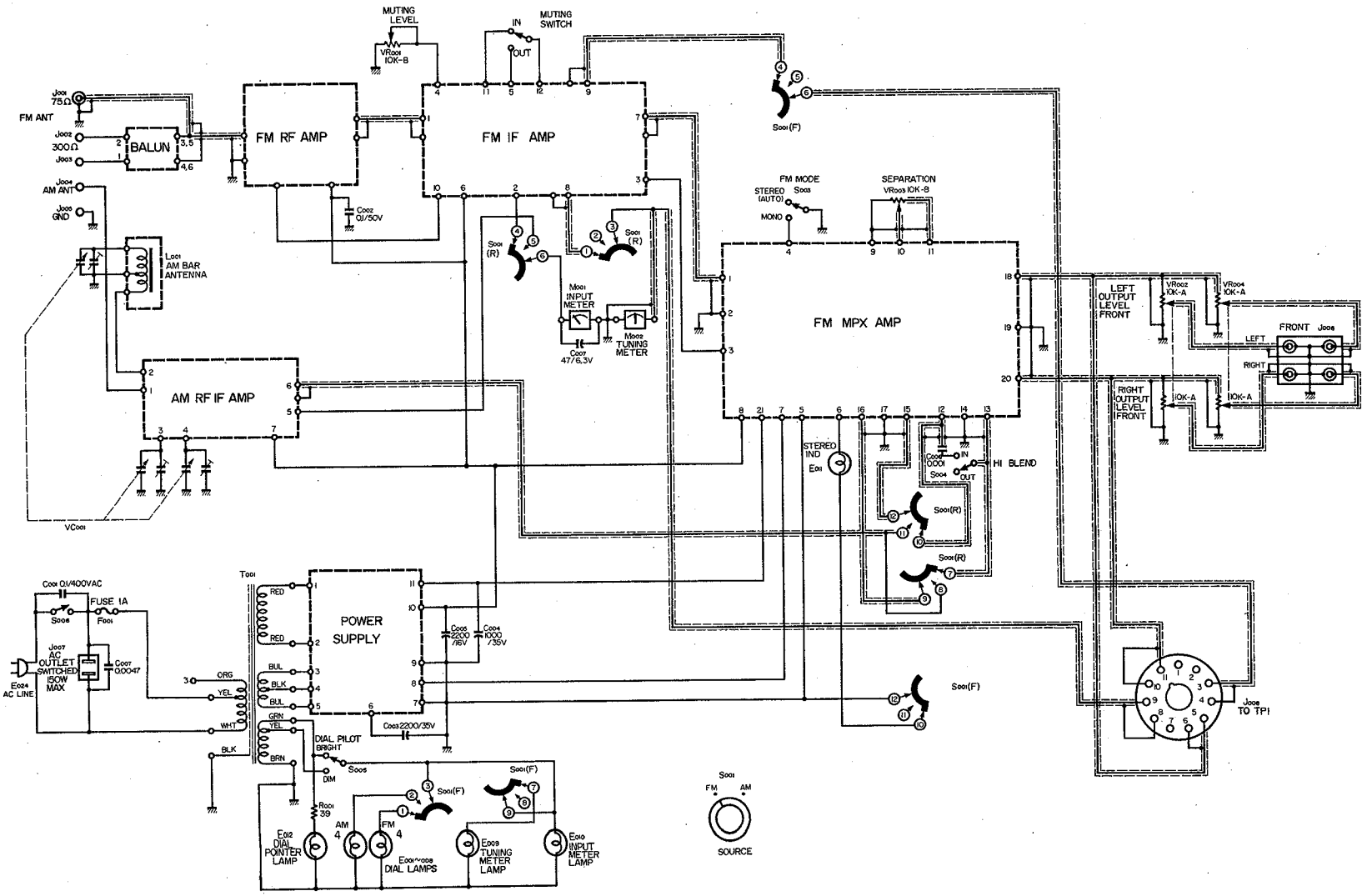
- SCHEMATIC DIAGRAMS
- PARTS LIST
- EXPLODED VIEW • PARTS LIST

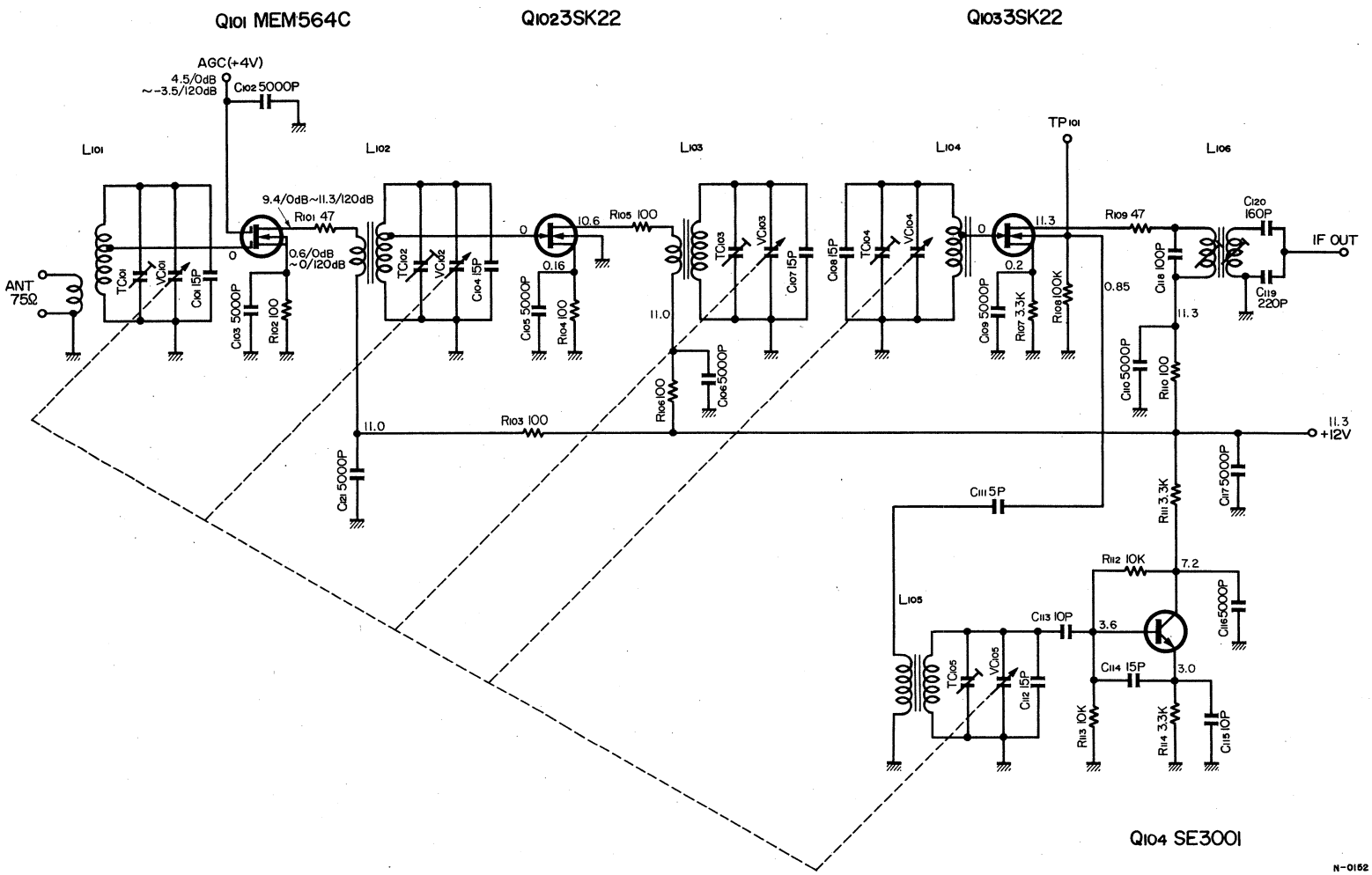
PARTS ORDERING INFORMATION

Replacement parts are available through your nearest TEAC dealer or directly from the TEAC office.
Changes are constantly being made to make TEAC products better and more reliable. Therefore, when ordering parts, always include the following information:

MODEL. SERIAL NO. REF. NO. PART NO. DESCRIPTION

SCHEMATIC DIAGRAM

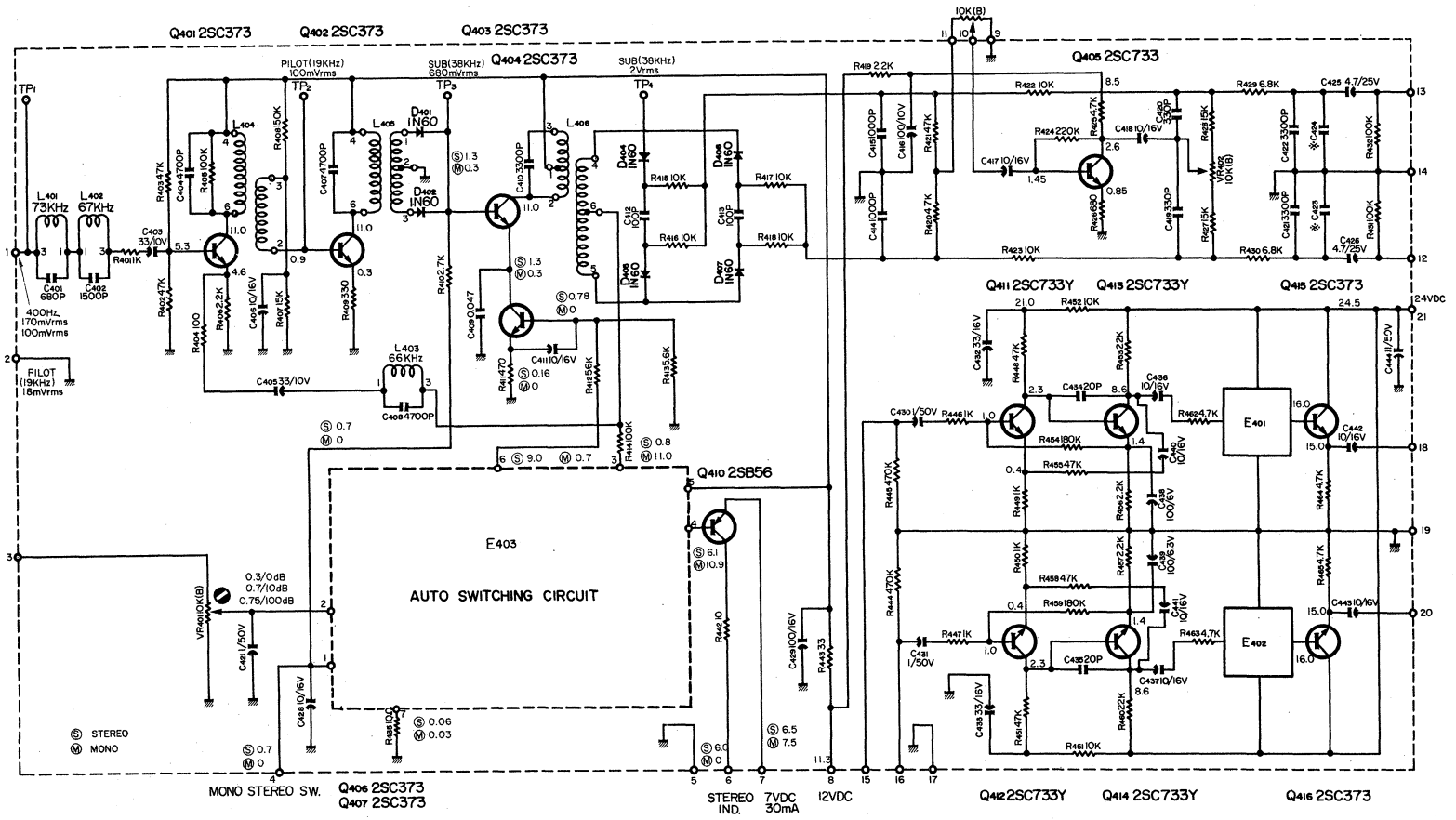


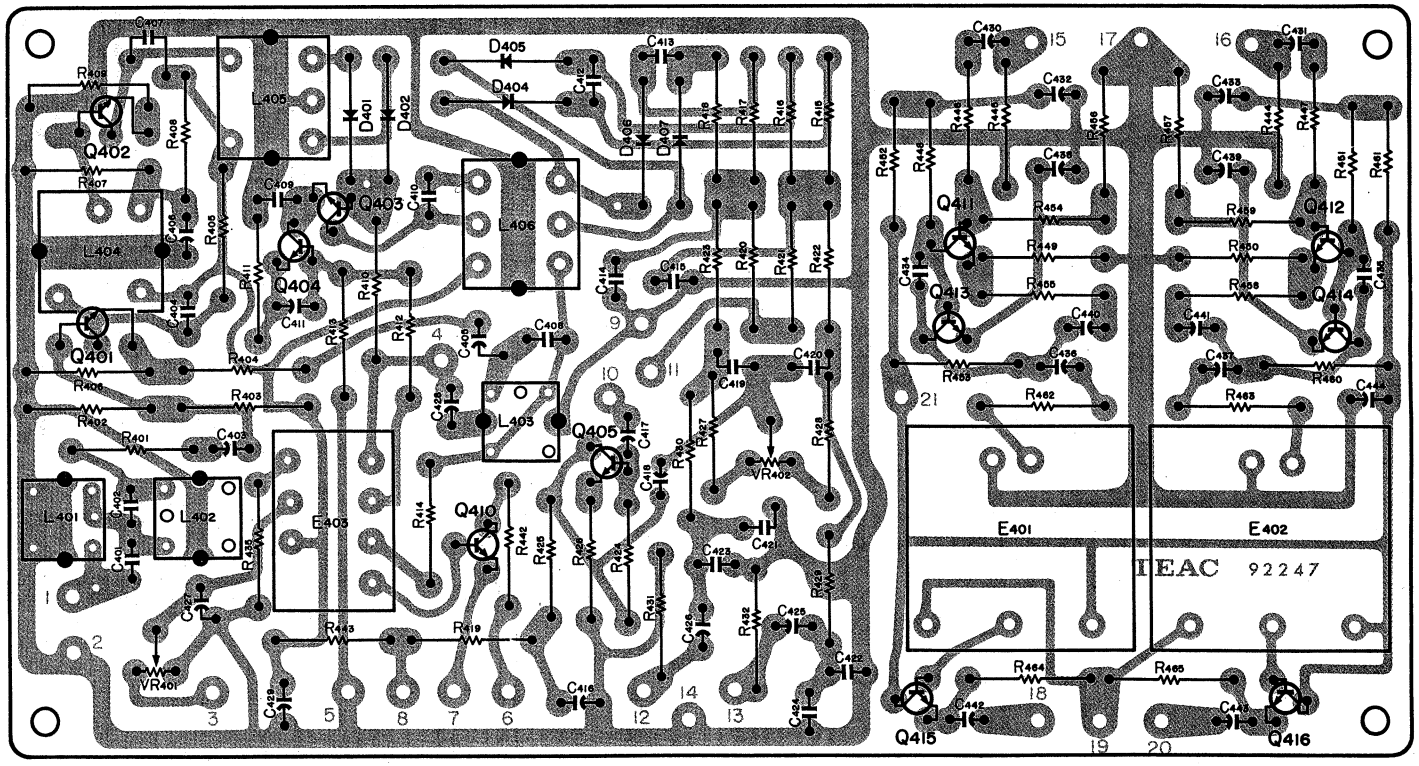


FM RF AMPLIFIER

SCHEMATIC DIAGRAM

FM MPX AMPLIFIER

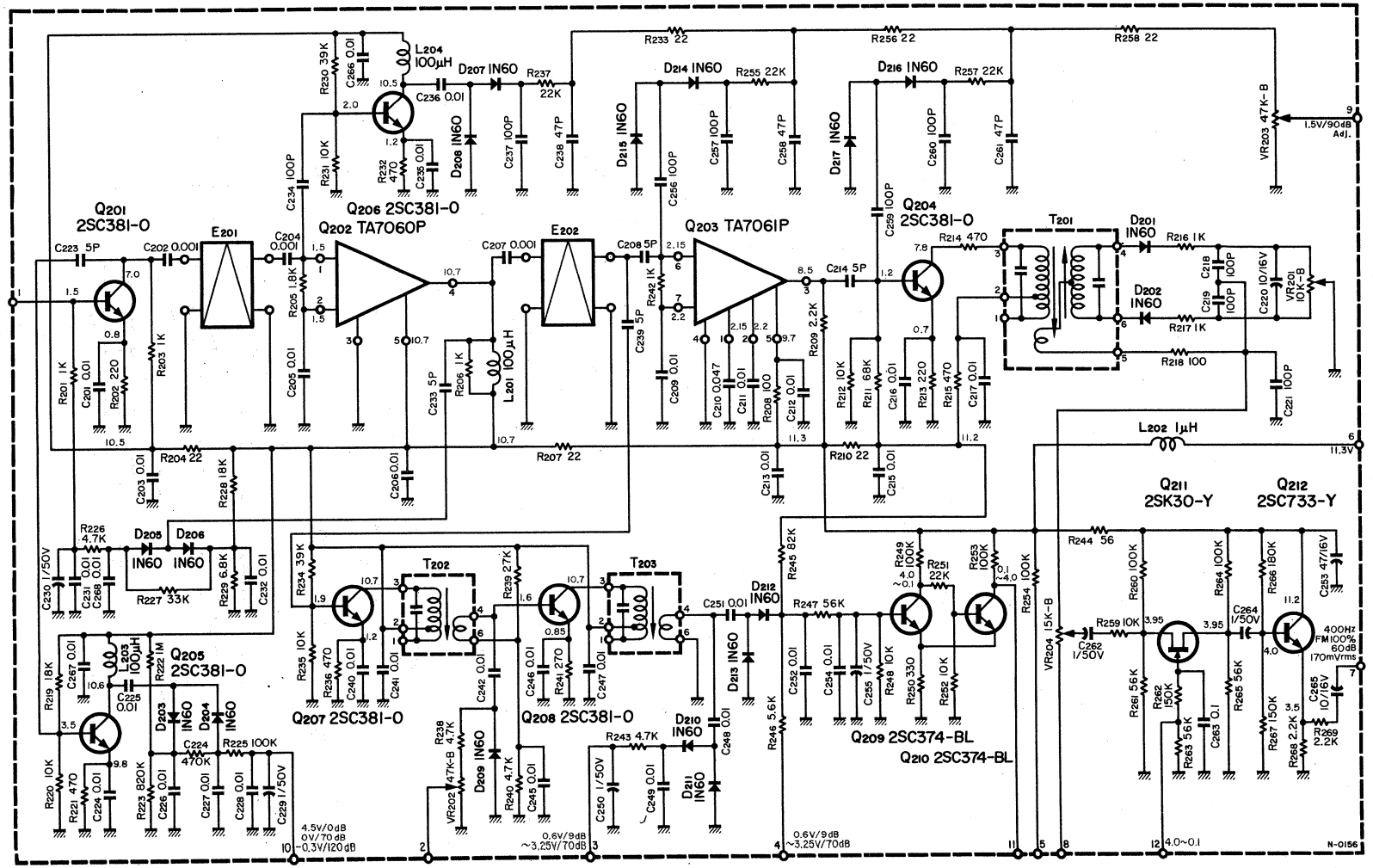


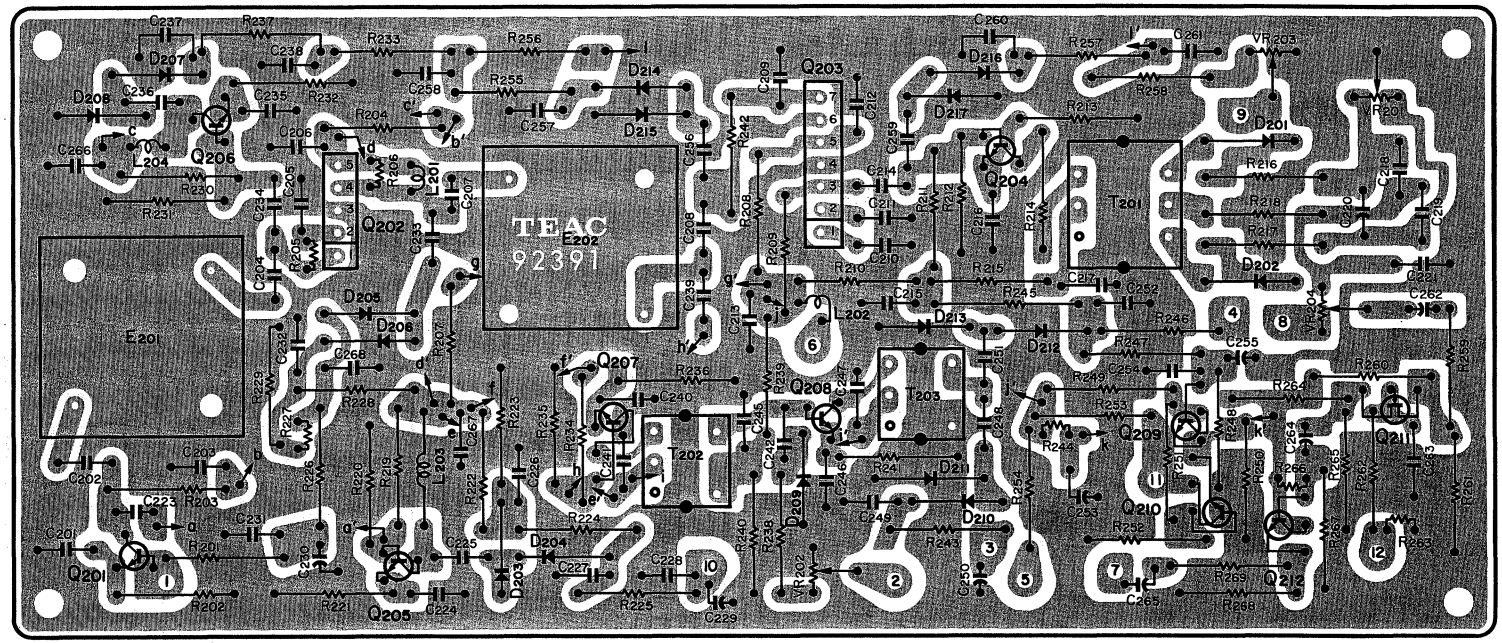


FM MPX AMPLIFIER

PC BOARD

FM IF AMPLIFIER



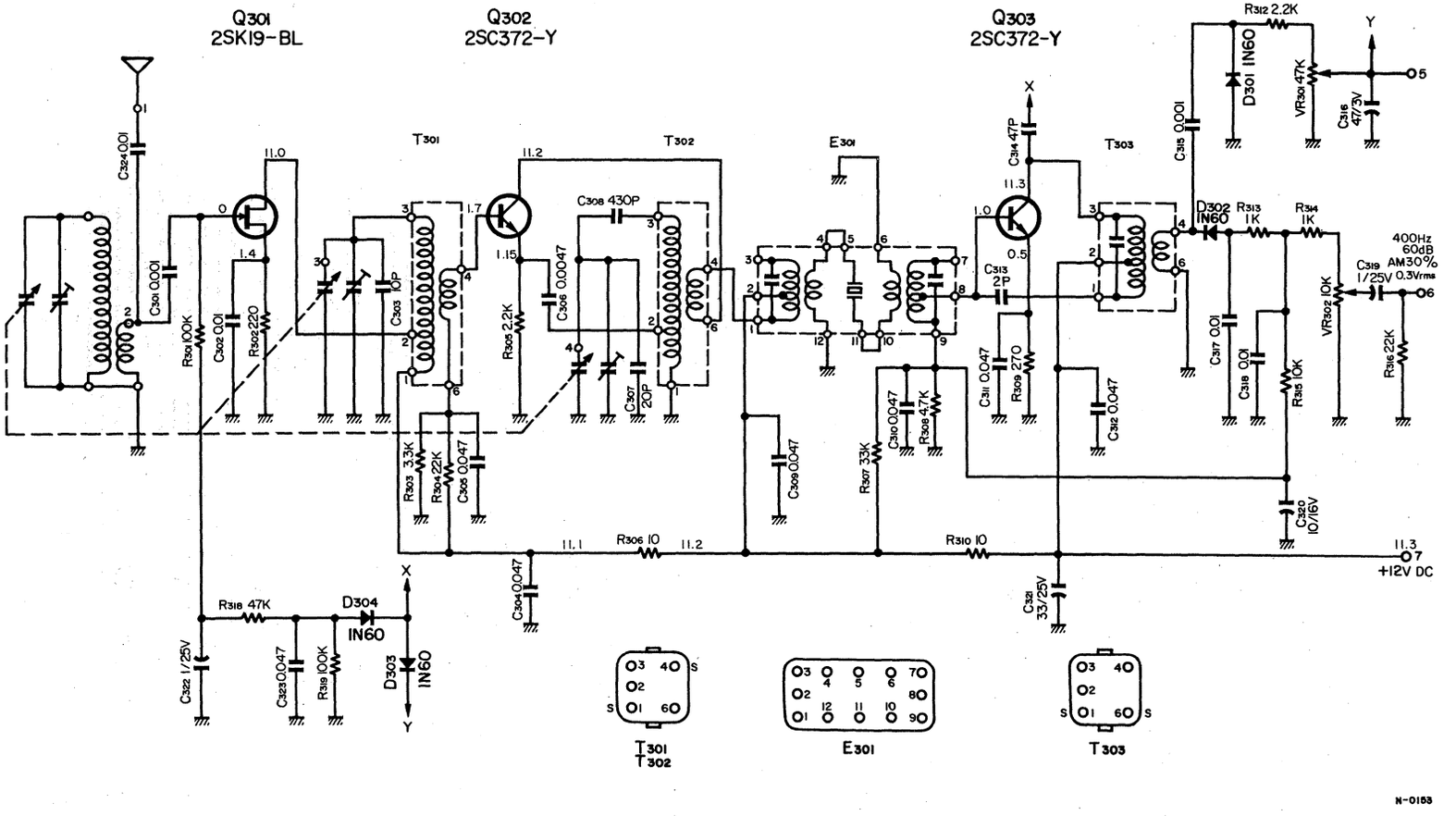


a – a′ : W201
b – b′ : W202
c – c′ : W203
d – d′ : W204
e – e′ : W205
f – f′ : W206
g – g′ : W207
h – h′ : W208
i – i′ : W209
j – j′ : W210
k – k′ : W211
l – l′ : W212

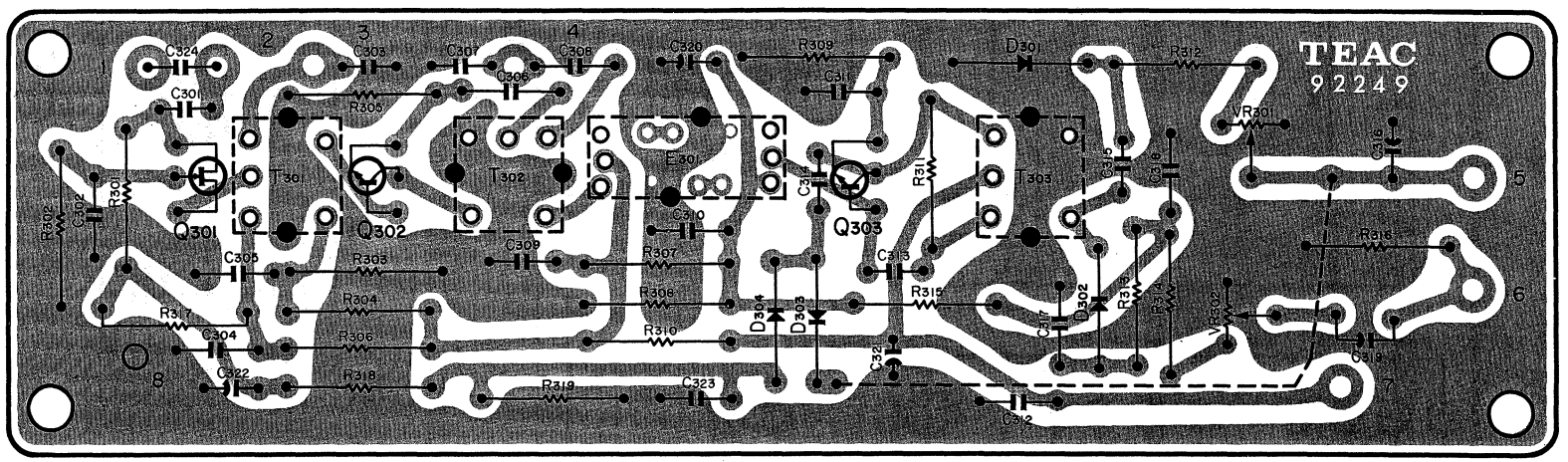
FM IF AMPLIFIER

PC BOARD

AM RF IF AMPLIFIER



N-0153

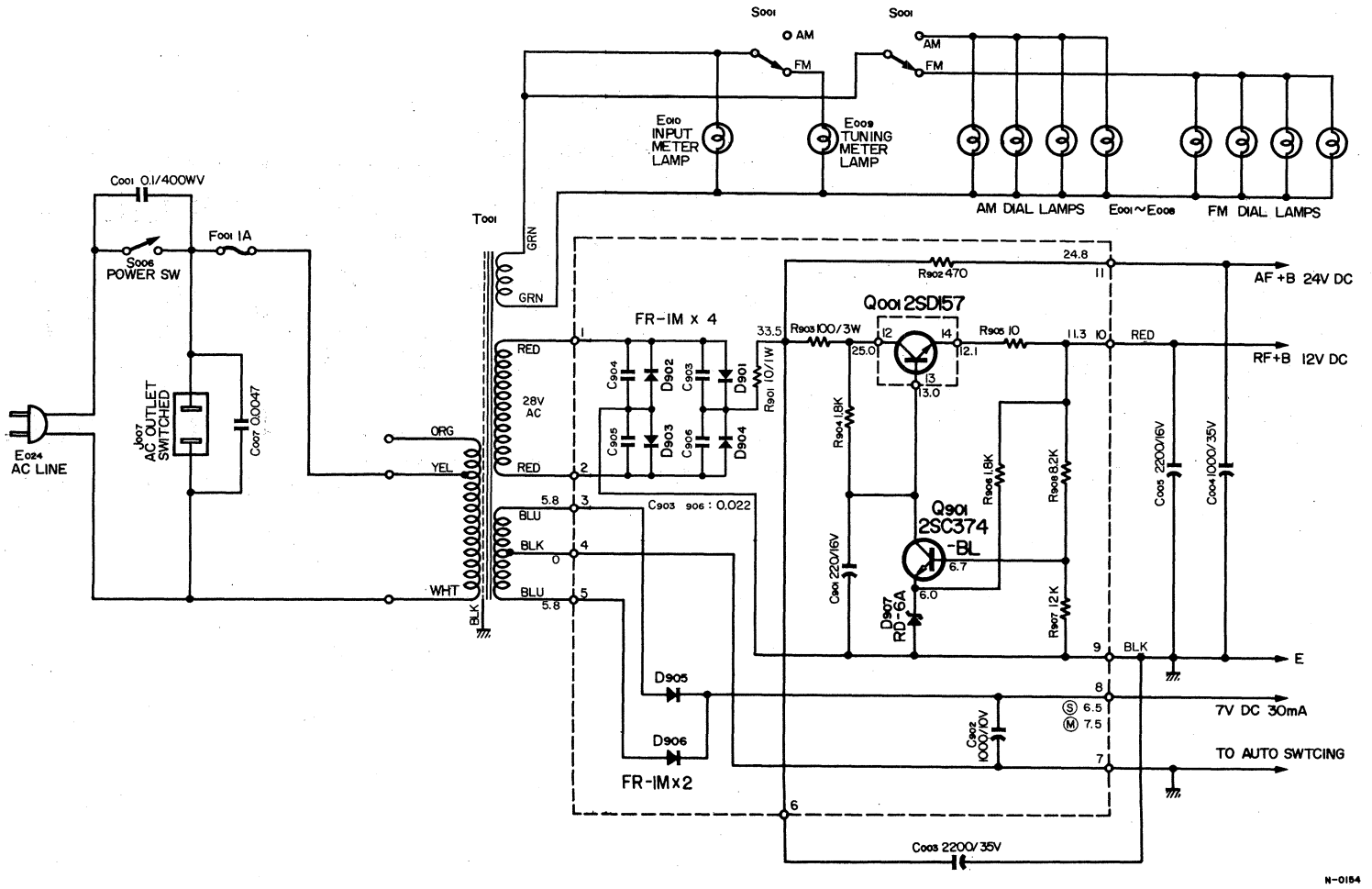


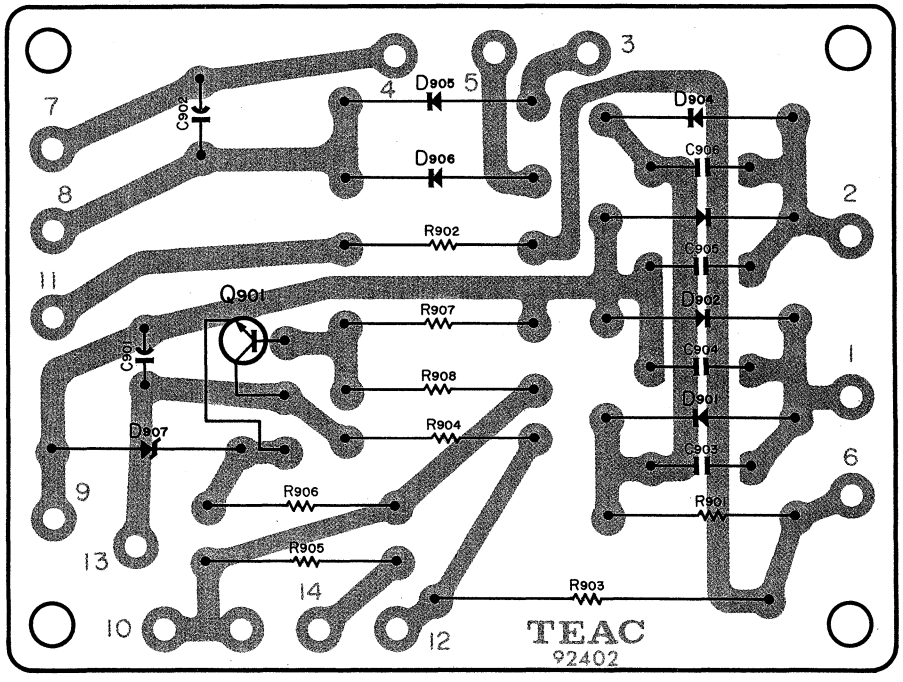
N-0113

AM RF IF AMPLIFIER

PC BOARD

POWER SUPPLY





POWER SUPPLY

PC BOARD

PARTS LIST

Circuit Ref. No.	Parts No.	Description	1st Revision	2nd Revision	3rd Revision
	CAPACITORS				
C002	5054804	Myler 0.1μ 50WV 10%			
C004	5055126	Electrolytic 1000μ 35WV			
C005	5055127	Electrolytic 2200μ 16WV			
C103	5055125	Electrolytic 2200μ 35WV			
	BACK PANEL ASSEMBLY				
	5092243-1	Back panel			
	5021211	Screw M3 x 6			
	5021583	Washer			
L001	5092265	Bar antenna			
	5092323	Mounting bracket			
	5092324	Mounting bracket (1)			
	5092325	Mounting bracket (2)			
	5092366	Mounting bracket (3)			
	5092367	Mounting band			
	5021210	Screw M3 x 6			
	5021212	Screw M3 x 8			
	5092266	Trunk			
J001	5092267				
J002~004	5045805	Push terminal (red)			
J005	5045306	Push terminal (white)			
J008	5043235	11P socket			
		Screw M3 x 6			
	5021132	Nut 3φ			
VR003	5092268	Potentiometer 10K-B			
VR004	5092269	Potentiometer 10K-AX2			
J006	5043019	US 4P Jack			
		Screw			
		Nut			
F001	5092450	Fuse holder			
E022	5041101	Fuse 1A			
J007	5092451	AC Outlet			
		Screw M3 x 8			
	5021132	Nut 3φ			
C007	5054111	UL Oil cap EDN-U4A472K			
E023	5027167	Grommet			
E024	5047165	AC Power cord			
	5092270	RF Balun assy			
	5092271	RF Balun PC board			
L002	5092273	Balun transformer			
	5092409	Name plate			
	5092063	Name plate			
E025	5092378	AM Antenna push			
	FM IF AMPLIFIER PC BOARD ASSY				
	5092393	FM IF AMP PC Board assy			
	5092391	FM IF AMP PC Board			
	CERAMIC CAPACITORS				
C201/203	5054204	0.01μF 50V			
C202/204	5054203	1000PF 50V			
C205/206	5054204	0.01μF 50V			
C207/	5054203	1000PF 50V			
C208/214	5054205	5PF 50V			
C209/211	5054204	0.01μF 50V			
C210	5054207	0.047μF 50V			
C212/213	5054204	0.01μF 50V			
C215/216	5054204	0.01μF 50V			
C218/219	5054202	100PF 50V			
C221/234	5054202	100PF 50V			
C223/233	5054205	5PF 50V			
C224/225	5054204	0.01μF 50V			
C226/227	5054204	0.01μF 50V			
C228/231	5054204	0.01μF 50V			
C232/235	5054204	0.01μF 50V			

PARTS LIST

Circuit Ref. No.	Parts No.	Description	1st Revision	2nd Revision	3rd Revision
C236/240	5054204	0.01μF 50V			
C237	5054202	100PF 50V			
C238/258	5054206	47PF 50V			
C239	5054205	5P 50V			
C241/242	5054204	0.01μF 50V			
C245/246	5054204	0.01μF 50V			
C247/248	5054204	0.01μF 50V			
C249/251	5054204	0.01μF 50V			
C252/254	5054204	0.01μF 50V			
C256/257	5054202	100PF 50V			
C259/260	5054202	100PF 50V			
C261	5054206	47PF 50V			
C266/267	5054204	0.01μF 50V			
C268/217	5054204	0.01μF 50V			
	ELECTROLYTIC CAPACITORS				
C220	5055405	10μF 16V			
C229/230	5055454	1μF 50V			
C250/255	5055454	1μF 50V			
C253	5055401	47μF 16V			
C262/264	5055454	1μF 50V			
C265	5055405	10μF 16V			
C263	5054804	Mylar cap 0.1μF 50V			
	CARBON RESISTORS				
R201/203	5051343	1K ¼W 10%			
R202/213	5051878	220 ¼W 10%			
R204/207	5051869	22 ¼W 10%			
R205	5051881	1.8K ¼W 10%			
R206	5051343	1K ¼W 10%			
R208/218	5051330	100 ¼W 10%			
R209	5051395	2.2K ¼W 10%			
R210/233	5051869	22 ¼W 10%			
R211	5051886	68K ¼W 10%			
R212/220	5051357	10K ¼W 10%			
R214/215	5051879	470 ¼W 10%			
R216/217	5051343	1K ¼W 10%			
R219/228	5051389	18K ¼W 10%			
R221/232	5051879	470 ¼W 10%			
R222	5051382	1M ¼W 10%			
R223	5051894	820K ¼W 10%			
R224	5051837	470K ¼W 10%			
R226/238	5051397	4.7K ¼W 10%			
R227	5051884	33K ¼W 10%			
R229	5051882	6.8K ¼W 10%			
R230/234	5051885	39K ¼W 10%			
R231/235	5051357	10K ¼W 10%			
R236	5051879	470 ¼W 10%			
R237/251	5051393	22K ¼W 10%			
R239	5051386	27K ¼W 10%			
R240/243	5051397	4.7K ¼W 10%			
R241	5051335	270 ¼W 10%			
R244	5051874	56 ¼W 10%			
R245	5051887	82K ¼W 10%			
R246	5051388	*5.6K ¼W 10%			
R248	5051357	*10K ¼W 10%			
R250	5051817	330 ¼W 10%			
R252/259	5051357	10K ¼W 10%			
R255/257	5051393	22K ¼W 10%			
R256/258	5051869	22 ¼W 10%			
R262/267	5051372	150K ¼W 10%			
R266	5051383	180K ¼W 10%			
R268/269	5051395	2.2K ¼W 10%			
R225/249	5051793	100K ¼W 5%			
R247	5051792	56K ¼W 5%			
R253/254	5051793	100K ¼W 5%			
R260/264	5051793	100K ¼W 5%			
R261	5051792	*56K ¼W 5%			
R263/265	5051792	56K ¼W 5%			

PARTS LIST

Circuit Ref. No.	Parts No.	Description	1st Revision	2nd Revision	3rd Revision
		P.C. MOUNT POTENTIOMETER			
VR201	5053348	10K SV10KR			
VR202/203	5053352	47K SV10KR			
VR204	5053354	15K SV10KR			
		TRANSISTORS			
Q201/204	5042370	2SC381-0			
Q205/206	5042370	2SC381-0			
Q207/208	5042370	2SC381-0			
Q209/210	5042340	2SC374-BL			
Q212	5042351	2SC733-Y			
Q211	5042384	2SK30-Y (FET)			
Q202	5042703	TA7060P (IC)			
Q203	5042704	TA7061P (IC)			
		DIODES			
D201~217	5042213	IN-60			
E201/202	5092276	Crystal filter TQF-2599			
		Nut 2ϕ			
		Washer 2ϕ			
		RF COILS			
L201	5056633	100μH			
L202	5056634	1μH			
L203/204	5056633	100μH			
		IF TRANSFORMERS			
T201	5092395	V4FLC-1474 AAE			
T202/203	5092275	KAC-6184A			
		MULTIPLEX ASSEMBLY			
	5092324	Multiplex assy			
	5092247	Multiplex PC board			
		POLYSTYRENE CAPACITORS			
C401	5054338	680PF 50V 10%			
C402	5054327	1500PF 50V 10%			
C404	5054345	4700PF 50V 10%			
C407/408	5054345	4700PF 50V 10%			
C410	5054346	3300PF 50V 10%			
C412/413	5054340	100PF 50V 10%			
C414/415	5054347	1000PF 50V 10%			
C419/420	5054334	330PF 50V 10%			
C421/422	5054346	3300PF 50V 10%			
C434/435	5054333	20PF 50V 10%			
		ELECTROLYTIC CAPACITORS			
C403/405	5055478	33μF 10V			
C406/411	5055405	10μF 16V			
C416	5055457	100μF 10V			
C417/418	5055405	10μF 16V			
C425/426	5055453	4.7μF 25V			
C427/444	5055454	1μF 50V			
C428	5055405	10μF 16V			
C429	5055479	100μF 16V			
C430/431	5055454	1μ 50 V			
C432/433	5055426	33μF 16V			
C436/437	5055405	10μF 16V			
C438/439	5055423	100μF 6.3V			
C440/441	5055405	10μF 16V			
C442/443	5055405	10μF 16V			
C409	5054827	Mylar cap 0.047μF 50V 10%			
		CARBON RESISTORS			
R401	5051343	1K ¼W 10%			
R402/403	5051387	47K ¼W 10%			
R404	5051330	100 ¼W 10%			
R405/414	5051370	100K ¼W 10%			

PARTS LIST

Circuit Ref. No.	Parts No.	Description	1st Revision	2nd Revision	3rd Revision
R406/419	5051395	2.2K ¼W 10%			
R407	5051359	15K ¼W 10%			
R408	5051372	150K ¼W 10%			
R409	5051817	330 ¼W 10%			
R410	5051805	2.7K ¼W 10%			
R411	5051879	470 ¼W 10%			
R412	5051399	56K ¼W 10%			
R413/433	5051388	5.6K ¼W 10%			
R415/416	5051357	10K ¼W 10%			
R417/418	5051357	10K ¼W 10%			
R420/421	5051387	47K ¼W 10%			
R422/423	5051357	10K ¼W 10%			
R424/434	5051888	220K ¼W 10%			
R425	5051397	4.7K ¼W 10%			
R426	5051392	680 ¼W 10%			
R427/428	5051359	15K ¼W 10%			
R429/430	5051882	6.8K ¼W 10%			
R431/432	5051370	100K ¼W 10%			
R435/442	5051310	10 ¼W 10%			
R436	5051393	22K ¼W 10%			
R437/440	5051397	4.7K ¼W 10%			
R438/439	5051393	22K ¼W 10%			
R441	5051395	2.2K ¼W 10%			
R443	5051871	33 ¼W 10%			
R444/445	5051837	470K ¼W 10%			
R446/447	5051343	1K ¼W 10%			
R448/451	5051387	47K ¼W 10%			
R449/450	5051343	1K ¼W 10%			
R452/461	5051357	10K ¼W 10%			
R453/460	5051393	22K ¼W 10%			
R454/459	5051383	180K ¼W 10%			
R455/458	5051387	47K ¼W 10%			
R456/457	5051395	22K ¼W 10%			
R462/463	5051397	4.7K ¼W 10%			
R464/465	5051397	4.7K ¼W 10%			
	TRANSISTORS				
Q401/402	5042338	2SC373			
Q403/404	5042338	2SC373			
Q405	5042351	2SC733-Y			
Q406/407	5042338	2SC373			
Q408/409	5042338	2SC373			
Q410	5042335	2SB56			
Q411/412	5042351	2SC733-Y			
Q413/414	5042351	2SC733-Y			
Q415/416	5042338	2SC373			
	DIODE				
D401~406	5042213	Diodes 1N-60			
	SCA FILTER COILS				
L401	5092279	73KHz 87BN1136HM (Red)			
L402	5092280	67KHz 87BN1137HM (Org)			
L403	5092281	66KHz 87BN1138HM (Yel)			
	FM MPX COILS				
L404/405	5092282	19KHz 17SN2263DAG (Wht)			
L406	5092283	38KHz 17SN1970ZZR (Blu)			
E401/402	5092277	Low pass filter DV-2100AL-Q			
F403	5092278	Auto switching 1C MC-5101B			
VR401/402	5053348	Potentiometer 10K SV10KR			

PARTS LIST

Circuit Ref. No.	Parts No.	Description	1st Revision	2nd Revision	3rd Revision
		AM TUNER PC BOARD ASSY			
	5092256	AM tuner PC baord assy			
	5092249	AM tuner PC board			
		TRANSISTORS			
Q301	5042371	2SK19-BL (FET)			
Q302·303	5042325	2SC372-Y			
		DIODES			
D301·302	5042213	IN-60			
D303·304	5042213	IN-60			
		RF IF X FORMERS			
E301	5092400	CFT-455E-1			
T301	5092333	YXR-18366GN (RF)			
T302	5092334	YXR-18367GN (L. OSC)			
T303	5092414	YMC-19251A (IF)			
		CERAMIC CAPACITORS			
C301	5054203	1000PF 50V			
C302·324	5054204	0.01μF 50V			
C303	5054201	10ρF 50V ±10%			
C304·305	5054207	0.047μF 50V			
C306	5054209	4700ρF 50V			
C307	5054210	20ρF 50V ±10%			
C308	5054208	430ρF 50V ±10%			
C309·310	5054207	0.047μF 50V			
C311·312	5054207	0.047μF 50V			
C313	5054212	2ρF 50V ±10%	Discontinue		
C314	5054206	47ρF 50V ±10%			
C315	5054203	1000ρF 50V ±10%			
C317·318	5054204	0.01μF 50V			
C323	5054207	0.047μF 50V			
		ELECTROLYTIC CAPACITORS			
C316	5055403	47μF 6.3V			
C319	5055481	1μF 25V			
C320	5055405	10μF 16V			
C321	5055448	33μF 25V			
C322	5055481	1μF 25V			
		CARBON RESISTOS			
		ALL RESISTOR IN OHM, UNLESS OTHERWISE NOTED.			
R301·319	5051370	100K ¼W ±10%			
R302	5051878	220 ¼W ±10%			
R303	5051394	3.9K ¼W ±10%			
R304	5051386	27K ¼W ±10%			
R305·312	5051395	2.2K ¼W ±10%			
R306·310	5051310	10 ¼W ±10%			
R307	5051884	33K ¼W ±10%			
R308	5051397	4.7K ¼W ±10%			
R309	5051335	270 ¼W ±10%			
R313·314	5051343	1K ¼W ±10%			
R315	5051357	10K ¼W ±10%			
R316	5051393	22K ¼W ±10%			
R318	5051387	47K ¼W ±10%			
		P C MOUNT POTENTIOMETER			
VR301·302	5053348	SV 10KR-10K			
		POWER SUPPLY PC BOARD ASSY			
	5092404	Power supply PC board assy			
	5092402	Power supply PC board			
		TRANSISTOR			
Q901	5042340	2SC 374-BL			
		DIODES			
D901·902	5042221	FR-IMD			
D903·904	5042221	FR-IMD			
D905·906	5042221	FR-IMD			
D907	5042235	RD-6A (Zener)			

PARTS LIST

Circuit Ref. No.	Parts No.	Description	1st Revision	2nd Revision	3rd Revision
		CERAMIC CAPACITORS			
C903·904	5054211	0.02μF 50V			
C905·906	5054211	0.02μF 50V			
		ELECTROLYTIC CAPACITORS			
C901	5055439	220μF 16V			
C902	5054480	1000μF 10V			
		CARBON RESISTORS			
		ALL RESISTOR IN OHM, UNLESS OTHERWISE NOTED.			
R902	5051782	470 ½W ±10%			
R904·906	5051781	1.8K ½W ±5%			
R905	5051789	10 ½W ±5%			
R907	5051783	12K ½W ±5%			
R908	5051784	8.2K ½W ±5%			
		METAL OXIDE RESISTORS			
R901	5052561	10 1W ±10%			
R903	5052575	100 3W ±10%			

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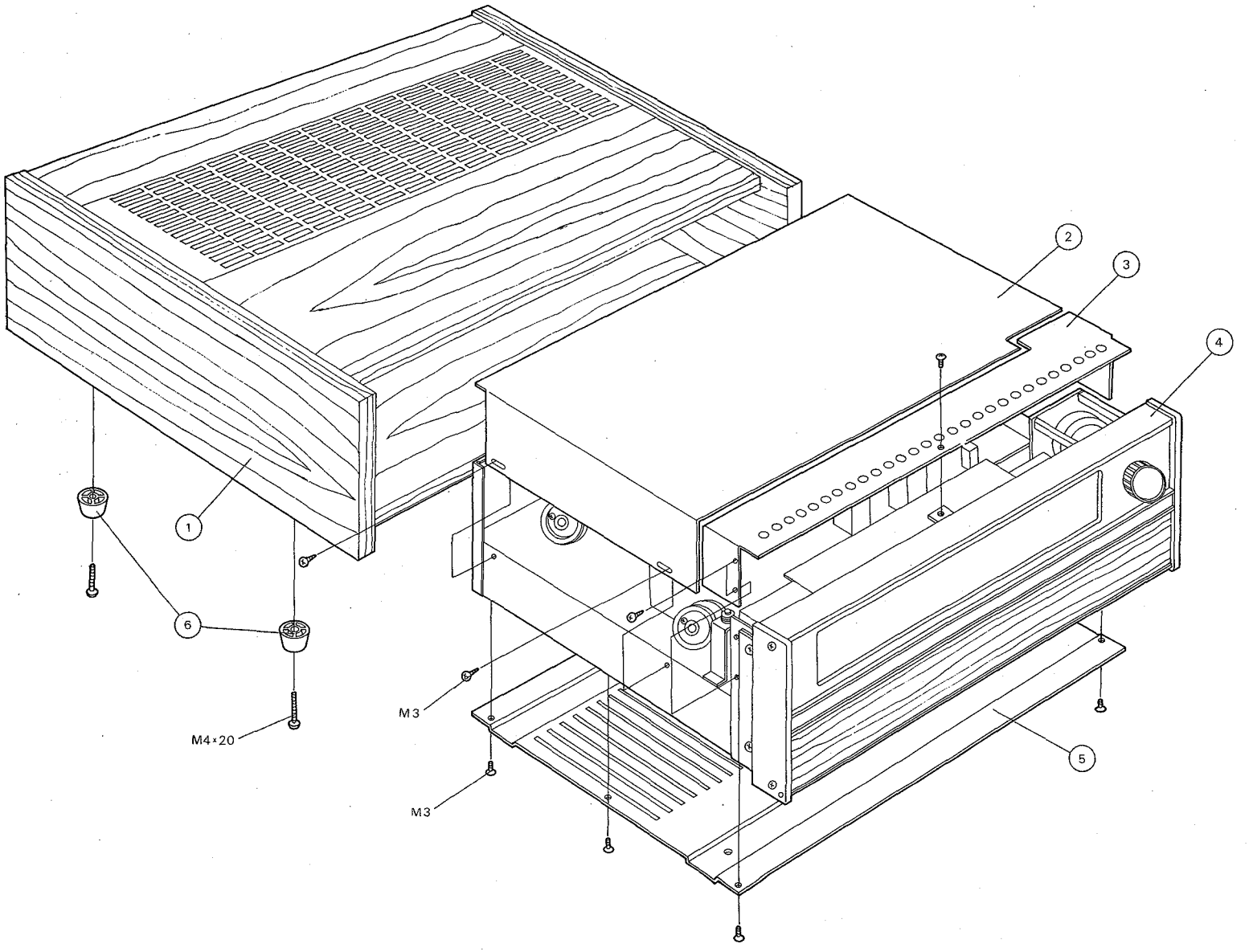
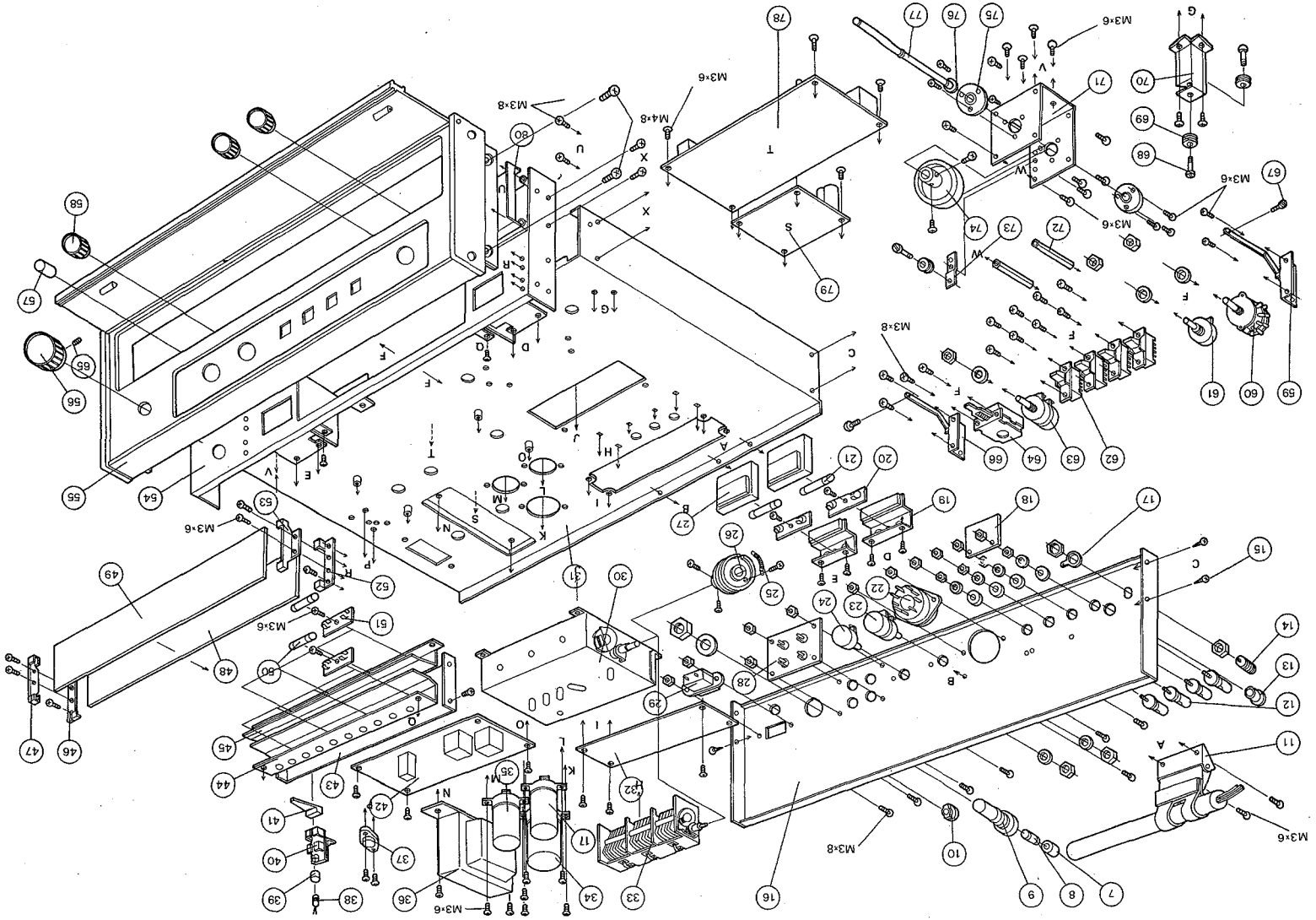
PARTS LIST

Ref. No.	Parts No.	Descritpion	1st Revision	2nd Revision	3rd Revision
1	5092087-1	Cabinet assy			
2	5092322	Chassis cover			
3	5092300	Dial protective cover			
4	5092425	Front panel assy			
5	5092008-1	Base plate			
6	5028383	Molded			
7	5092450	Fuse holder cap			
8	5041101	Fuse 1A			
9	5092450	Fuse holder			
10	5027167	Grommet			
11	5092265	Bar antenna			
12	5045805	Push terminal			
13	5092378	AM Antenna push			
14	5092267	Connector 75Ω			
15	5021211	Screw M3 x 6			
16	5092243-1	Back panel			
17	5055126	Electrolytic cap 1000μF 35V			
18	5092270	RF Balun			
19	5092287	Meter bracket			
20	5041218	1P Fuse holder			
21	5041432	Pilot lamp (glass tube)			
22	5043235	11P Socket			
23	5092269	Potentiometer 10K-AX2			
24	5092268	Potentiometer 10K-B			
25	5092387	Dial spring			
26	5092312-1	Dial drum			
27	5092262	Tuning meter			
28	5043019	US 4P Jack			
29	5092451	AC Outlet			
30	5092253	FM RF AMP Assy			
31	5092242-1	Chassis			
32	5092256	AM Tuner assy			
33	5092264	AM Variable capacitor			
34	5055125	Electrolytic cap 2200μF 35V			
35	5055127	Electrolytic cap 2200μF 16V			
36	5092406	Power X Former			
37	5042356	Transistor 2SD 157			
38	5041433	Needle lamp EM-5-200YV			
39	5092286	Light shield tube			
40	5092314	Needle bracket			
41	5092313	Needle			
42	5092393-1	FM IF AMP Assy			
43	5092311	Guide board mounting plate			
44	5092298	Lamp mounting bracket (A)			
45	5092299	Lamp mounting bracket (B)			
46	5092384	Mounting bracket (R)			
47	5092383	Smoked retainer (R)			
48	5092293	Dial scale plate			
49	5092289	Smoked glass			
50	5041432	Pilot lamp (glass tube)			
51	5041218	1P Fuse holder			
52	5092295	Mounting bracket (L)			
53	5092290	Smoked retainer (L)			
54	5092241	Front chassis			
55	5092338	Front panel			
56	5092408	Knob (large)			
57	5092050	Power switch button			
58	5092599-1	Knob (small)			
59	5092055-1	Stay assy			
60	5092399-1	Source switch Y-282			
61	5092398-1	Potentiometer 10KΩ-B			
62	5044712	Lever switch			
63	5092397-1	Potentiometer 10KA x 2			
64	5044321	Power switch			
65	5021719	Screw M4 x 6			
66	5092055-1	Stay assy			
67	5021211	Screw M3 x 6			
68	5092321	Pulley screw			
69	5092320	Pulley			
70	5092316	Block pulley mounting bracket A			
71	5092304	Dial mounting bracket			
72	5092305	Dial supporting post			
73	5092318	Block pulley mounting bracket C			
74	5092309	Fly wheel			
75	5092308	Dial shaft collar			
76	5092307	Teflon washer			
77	5092306-1	Dial shaft			
78	5092255-1	Multiplex assy			
79	5092404	Stabilized power supply assy			
80	5092407	Control panel			



EXPLODED VIEW



EXPLODED VIEW